Testimony Summary:
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Office of Air and Radiation, U.S. Environmental Protection Agency
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Subcommittee on Energy and Air Quality
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Introduction

In his 2007 State of the Union Address, the President challenged the nation to address our growing reliance on oil. He called for reducing gasoline consumption by 20 percent in the next 10 years, while doing so in a way that keeps America's economy growing and protects our environment. The "Twenty in Ten" plan includes a proposed requirement for 35 billion gallons of alternative fuel in 2017. This aggressive goal would build upon EPA's current renewable fuel standard, or RFS program, and require the use of renewable and alternative fuel well beyond the 2012 target set by the Energy Policy Act of 2005 (EPAct 2005).

Renewable Fuel Standard (RFS)

On April 10, EPA Administrator Johnson signed the final RFS rule, which establishes a comprehensive program that will lead to more than doubling the amount of renewable fuel use between 2006 and 2012. This landmark rule provides market certainty for the expanded production and use of renewable fuels by requiring minimum amounts of renewable fuel volumes to be used in our nation's transportation fuel supply. The core compliance measure of the RFS, the credit trading program, was carefully designed by EPA staff in close collaboration with various stakeholders.

EPA conducted a number of detailed analyses of the RFS program, including the energy, emissions, air quality, and economic impacts of expanded renewable fuel use. Further information on these analyses can be found in EPA's written testimony and on the RFS website, accessible at http://epa.gov/otaq/renewablefuels/index.htm.

Alternative Fuel Standard (AFS)

The Administration's proposed AFS provides an opportunity to address two important national goals—improving our energy security and reducing greenhouse gas emissions from the transportation sector. The AFS includes fuels or fuel components such as ethanol, biodiesel, butanol, as well as other alternatives to crude oil-based fuels such as natural gas, hydrogen, and coal-to-liquids. As proposed, the AFS would replace the RFS in the year 2010, but would retain the flexible credit, banking and trading mechanisms contained in the RFS. The legislation provides an accelerating schedule for AFS requirements in the years 2010 to 2017. After 2017, similar to the RFS, the level of the AFS would be set administratively based on several factors. Finally, the AFS includes different kinds of "safety valves" to protect economic and environmental interests, including one that guards against unforeseen increases in the prices of alternative fuels or their feedstocks by allowing the sale of credits at $1 per gallon of ethanol (or about $0.67 per gallon of gasoline equivalent),

Summary

EPA's success in crafting and adopting RFS regulations under EPAct 2005 has proven to be a critical first step in the national expansion of renewable and alternative fuel use in the transportation sector. EPA stands ready to work with Congress to build on this success and to enact the Alternative Fuel Standard into law.

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BEFORE THE COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON ENERGY AND AIR QUALITY
U.S. HOUSE OF REPRESENTATIVES
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Mr. Chairman, and members of the Subcommittee, I appreciate the opportunity to come before you today to testify on how the expanded use of renewable and alternative fuels supports the President's goals of enhanced energy security and strengthened environmental protection.

Introduction

In his 2007 State of the Union Address, the President challenged the nation to address our growing reliance on oil. He called for reducing gasoline consumption by 20 percent in the next 10 years, while doing so in a way that keeps America's economy growing and protects our environment. This "Twenty in Ten" plan includes a proposed requirement for 35 billion gallons of alternative fuel in 2017. This aggressive goal would build upon EPA's current renewable fuel standard, or RFS program, and require the use of renewable and alternative fuel well beyond the 2012 target set by the Energy Policy Act of 2005 (EPAct 2005). Expanding this mandate is expected to decrease projected gasoline use by 15 percent. The President's plan seeks to achieve another five percent reduction in gasoline consumption through the Administration's proposal to reform CAFE standards for passenger cars and to extend the current light truck rule. The President's energy plans also emphasize the energy security benefits of increasing domestic oil and gas production and doubling the current capacity of the Strategic Petroleum Reserve.

"Twenty in Ten" would diversify the sources and types of fuels we use, while reducing our vulnerability to supply disruptions, sudden price increases, and our overall dependence on oil. At the same time, the plan could help confront the serious challenge of climate change. Attaining these goals will require significant advancements in technology and careful assessment of their benefits and costs. Most importantly, Congress must pass legislation to allow these programs to become a reality.

The Alternative Fuel Standard

The Administration's proposed Alternative Fuel Standard sets forth an ambitious, but achievable, path forward for an expansion of the use of renewable and alternative fuels. The AFS specifies that 35 billion gallons of alternative fuel be used in the nation's transportation fuel by the year 2017. The AFS would include all fuels that are currently part of the RFS and would include fuels currently classified as "alternative fuels" under the Energy Policy Act. It would also allow other types of fuels to qualify as alternatives for compliance, adding competition in the alternative fuel marketplace. The AFS includes fuels or fuel components such as ethanol (derived from a variety of sources, including corn and cellulosic feedstock), biodiesel, butanol, as well as other alternatives to crude oil-based fuels such as natural gas, hydrogen, and coal-to-liquids. The AFS would also include the use of electricity to power advanced vehicles, including "plug-in" hybrid vehicles.

As proposed by the Administration, the AFS would replace the RFS in the year 2010, but would retain the flexible credit, banking and trading mechanisms contained in the RFS. The legislation provides an accelerating schedule for AFS requirements in the years 2010 to 2017.

After 2017, similar to the RFS, the level of the AFS would be set administratively based on several factors including the impact of alternative fuels on energy security and diversification, costs to consumers, job creation and the environment.

The AFS also includes different kinds of "safety valves" to protect economic and environmental interests. For example, the Administration will be required to review the impact of the AFS annually and may adjust the annual requirement if short or long term conditions exist that adversely affect the production or importation of alternative fuels. Under certain circumstances, the Administration could issue a temporary waiver of any or all the requirements of the AFS. The AFS also includes an automatic "safety valve" that serves as an "economic backstop" to ensure that mandating 35 billions of alternative fuel does not excessively increase the cost of gasoline and diesel to American consumers. By allowing the sale of credits at $1 per gallon of ethanol (or about $0.67 per gallon of gasoline equivalent), the "safety valve" guards against unforeseen increases in the prices of alternative fuels or their feedstocks, protecting other markets from being adversely impacted and minimizing costs to consumers. This feature provides some market certainty—businesses can calculate their maximum cost of compliance. They then can use their ingenuity to deliver value and minimize their compliance costs.

The AFS provides an opportunity to address two important national goals—improving our energy security and potentially reducing greenhouse gas emissions from the transportation sector. EPA has estimated that the RFS would help achieve greenhouse gas emissions of up to 13 million metric tons in 2012. Although different AFS fuels will serve to offset greenhouse gas

emissions by different amounts, increasing the use of fuels under an AFS program could result in greater greenhouse gas emission reductions than our current mix of fuels. For example, one advantage of the longer timeframe provided by the President's proposal, along with the market incentives it creates, is allowing for commercial development of cost-competitive cellulosic ethanol. Cellulosic ethanol may achieve very large greenhouse gas reductions—up to 90% compared to petroleum-based gasoline. Other fuels like electricity, compressed natural gas, and liquefied natural gas can achieve substantial greenhouse gas reductions. Ultimately, the level of greenhouse gas reductions achieved by the AFS will depend on the implementation of the program, market forces, the incentives available for the development of various renewable and alternative fuels and the mix of fuels used to meet the target.

The National Renewable Fuels Standard

On April 10, Administrator Johnson signed the National Renewable Fuels Standard Rule, which establishes a comprehensive program that will lead to more than doubling the amount of renewable fuel use between 2006 and 2012. This landmark rule provides market certainty for the expanded production and use of renewable fuels by requiring minimum amounts of renewable fuel volumes to be used in our nation's transportation fuel supply. It also establishes important compliance and implementation measures necessary to assure that these minimum volumes are met. The AFS would build upon the recently completed RFS regulation -- the first milestone in increasing the amount of domestically-produced renewable fuels used in motor vehicles.

The core compliance measure of the RFS, the credit trading program, was carefully designed by EPA staff in close collaboration with various stakeholders. It works with the

existing markets by allowing renewable fuels to be blended when and where it makes sense, while maintaining the necessary flexibility to expand the number and types of fuels as they come to the market.

EPA conducted a number of detailed analyses of the RFS program, including the energy, emissions, air quality, and economic impacts of expanded renewable fuel use. These impacts vary depending on the volume and type of renewable fuel anticipated to be used. Our analyses projected fuel use in 2012 using both the minimum volume of renewable fuel required under EPAct2005 and higher volumes projected in the Energy Information Administration's 2006 Annual Energy Outlook. Thus, the results of EPA's analysis show a range based on these two projections using a 2004 baseline.

With regard to petroleum consumption impacts, EPA estimates that this transition to renewable fuels will result in reductions of between 2.0 and 3.9 billion gallons of petroleum consumption, or roughly 0.8 to 1.6 percent of the approximately 250 billion gallons of petroleum that would otherwise be used in the transportation sector in 2012. EPA also projected that the RFS also will achieve reductions in carbon dioxide equivalent greenhouse gas emissions between 8.0 and 13.1 million metric tons, or about 0.4 to 0.6 percent of the anticipated greenhouse gas emissions from the transportation sector in the United States in 2012. EPA's analyses additionally found that with regard to other emissions impacts, this program could help reduce carbon monoxide emissions from gasoline-powered vehicles and equipment between 0.9 and 2.5 percent and emissions of benzene, a toxic mobile source air pollutant, between 1.8 and 4.0 percent.

At the same time, however, other vehicle emissions may increase, including volatile organic compounds, or VOC's, and oxides of nitrogen, or NOx, both of which are precursors of ozone. These effects will vary significantly by region: areas that already use ethanol blended into gasoline will experience little or no additional change in vehicle emissions or air quality. Those areas where ethanol use increases substantially as a result of the RFS program may see an increase in VOC emissions between 4 and 5 percent and an increase in NOx emissions between 6 and 7 percent from gasoline-powered vehicles and equipment. Emissions of certain air toxics, like acetaldehyde, also increase although the overall volume of such emissions is not large in comparison with the volume of reductions in benzene.

EPA's analysis also included a look at the potential impacts on the nation's agricultural sector. This work found that an increase in the use of renewable fuels associated with the RFS promotes rural development by increasing annual aggregate farm income between $2.7 and $5.4 billion dollars in 2012. In addition, EPA's analysis estimated a possible modest increase in food costs and a potential decrease in exports of certain agricultural commodities such as corn

With regard to implementation, the RFS program builds on the Agency's three decades of experience implementing innovative transportation clean fuel programs. For example, over the past decade, EPA's fuel programs have pioneered the use of secure electronic data collection. As part of our fuel program compliance activities, EPA currently collects thousands of reports each year through a sophisticated data system that both assures quality and tracks and reports information from fuel producers and distributors across the country. This system has unique capability to process confidential business information (CBI) electronically.

In addition to electronic reporting, the RFS also uses flexible regulatory mechanisms like averaging, banking, and trading (ABT). We have found incorporating ABT programs assists the fuels industry by providing the flexibility to generate, hold, sell or purchase compliance credits at times and at appropriate volumes that best allow companies to meet their RFS regulatory obligations. The recent gasoline and diesel sulfur reduction programs are successfully using ABT flexibility.

Altogether, the President's AFS proposal recognizes the critical need to reduce our nation's dependence on foreign oil as well as to address rising emissions of greenhouse gases from motor vehicles and off-road vehicles. EPA's success in crafting and adopting RFS regulations under EPAct 2005 has proven to be a critical first step in the national expansion of renewable and alternative fuel use in the transportation sector. As Congress considers ways to build on this success, the country now has a model that should help assure the long-term viability of a renewable and alternative fuels program. EPA stands ready to work with Congress to enact the Alternative Fuel Standard into law.

Thank you, Mr. Chairman, and the members of the Subcommittee for this opportunity. This concludes my prepared statement. I would be pleased to answer any questions that you may have.